ORDER NO. HADB512314A1
A2

Service Manual

AM/FM Stereo Receiver

Receiver

SA-913

Color

(K)...Black Type

Color	Area
(K)	[M]....U.S.A.

Please use this manual together with the service manual for Model No. SA-130, Order No. HADB512313C1.

CHANGES

■ REPLACEMENT PARTS LIST

Notes: • Part numbers are indicated on most mechanical parts.
Please use this part number for parts order.

Ref. No.	Change of Parts No.		Part Name & Description	Pcs/ Set	Remarks
	SA-130 [M]	SA-913			
CABINET and CHASSIS PARTS					
2	SGWA130 – KM	SGWA913 – KM	Front Panel Ass'y **(MESA)**	1	
3	SGU333 – 19	SGU333 – 21	Dial Scale **(MESA)**	1	
4	SBN1091 – 3	SBN1091	Knob, Tuning	1	
5	SGX765T – 8	SGX765T – 12	Front Sub Panel **(MESA)**	1	
6	SBD69 – 5	SBD69 – 2T	Knob, Tone Selector	3	
7	SBC666 – 3	SBC62T	Button, Power Switch	1	
10	SBC563 – 2T	SBC563 – 1T	Button, Input Selector	3	
11	SBC463 – 10T	SBC463 – 6T	Button, Band Selector	1	
21	SBD77 – 2T	SBD77T	Knob, Volume	1	
23	SBC423 – 3T	SBC423T	Button	1	
25	SBC463 – 10T	SBC463 – 6T	Button, Speaker Selector	3	
30	SDF1167 – 2	SDF1167 – 1	Dial Pointer	1	
31	SGP6130 – 1C	SGP6130 – 1D	Rear Panel **(MESA)**	1	
ACCESSORY					
A6	SDF12619	SDF12620	Instruction Book **(MESA)**	1	
PACKING PART					
P5	SPG2491	SPG2492	Carton Box **(MESA)**	1	

Technics

Matsushita Services Company
50 Meadowland Parkway
Secaucus, New Jersey 07094

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Victoria Industrial Park
Carolina, Puerto Rico 00630

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ORDER NO. HAD8608678C2

Service Manual

Receiver

SA-130

SA-130

AM/FM Stereo Receiver

Color

(S) ... Silver Type
(K) ... Black Type

Color	Areas
(K), (S)	[EX] ..... Continental Europe.
(K), (S)	[EH] ..... Holland.
(S)	[Ei] ..... Italy.

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

1 kHz continuous power output both channels driven	2×35 W (8Ω)
Total harmonic distortion rated power at 1 kHz	0.07 % (8Ω)
Intermodulation distortion rated power at 60 Hz: 7 kHz=4: 1, SMPTE, 8Ω	0.5 %
Power bandwidth both channels driven, −3 dB	10 Hz～30 kHz (8Ω)
Damping factor	
Input sensitivity and impedance	
PHONO	2.5 mV/47 kΩ
CD/AUX, TAPE	150 mV/18 kΩ
PHONO maximum input voltage (1 kHz, RMS)	130 mV
S/N	
rated power (8Ω)	
PHONO	68 dB (IHF, A: 71 dB)
CD/AUX, TAPE	88 dB (IHF, A: 95 dB)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz～15 kHz)
CD/AUX, TAPE	5 Hz～70 kHz (−3 dB)
Tone controls	
BASS	50 Hz, +10 dB～−10 dB
TREBLE	20 kHz, +10 dB～−10 dB
Output voltage	
REC OUT	150 mV
Channel balance, CD/AUX 250 Hz～6,300 Hz	±1 dB
Channel separation, CD/AUX	55 dB
Headphones output level and impedance	390 mV/330Ω
Load impedance	
MAIN or REMOTE	8Ω～16Ω
MAIN and REMOTE	8Ω～16Ω

■ FM TUNER SECTION

Frequency range	87.5～108 MHz
Sensitivity	
S/N 30 dB	1.9 μV (300Ω), 1.3 μV (75Ω)
S/N 26 dB	1.7 μV (300Ω), 1.2 μV (75Ω)
S/N 20 dB	1.5 μV (300Ω), 0.9 μV (75Ω)
IHF usable sensitivity	1.9 μV (IHF '58)
IHF 46 dB stereo quieting sensitivity	22 μV/75Ω)
Total harmonic distortion	
MONO	0.15 %
STEREO	0.3 %
S/N	
MONO	60 dB (76 dB, IHF)
STEREO	58 dB (70 dB, IHF)
Frequency response	20 Hz～15 kHz, +1 dB～−2 dB
Alternate channel selectivity ±400 kHz	60 dB
Capture ratio	1 dB
Image rejection at 98 MHz	40 dB
IF rejection at 98 MHz	60 dB
Spurious response rejection at 98 MHz	70 dB
AM suppression	50 dB
Stereo separation	
1 kHz	40 dB
10 kHz	30 dB
Carrier leak	
19 kHz	−33 dB (−35 dB, IHF)
38 kHz	−50 dB (−50 dB, IHF)
Channel balance (250 Hz～6,300 Hz)	±1.5 dB
Limiting point	1.2 μV
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminals	300Ω (balanced) 75Ω (unbalanced)

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ AM TUNER SECTION

Frequency range	527~1605kHz
Sensitivity (S/N 20dB)	20μV, 300μV/m
Selectivity	27dB
Image rejection at 1,000kHz	40dB
IF rejection at 1,000kHz	55dB

■ GENERAL

Power consumption	180W
Power supply	AC 50Hz/60Hz, 220V
Dimensions (W×H×D)	430×97×249mm (16-15/16″×3-13/16″×9-13/16″)
Weight	5.0kg (11.0lb.)

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

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■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below.

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

Note:

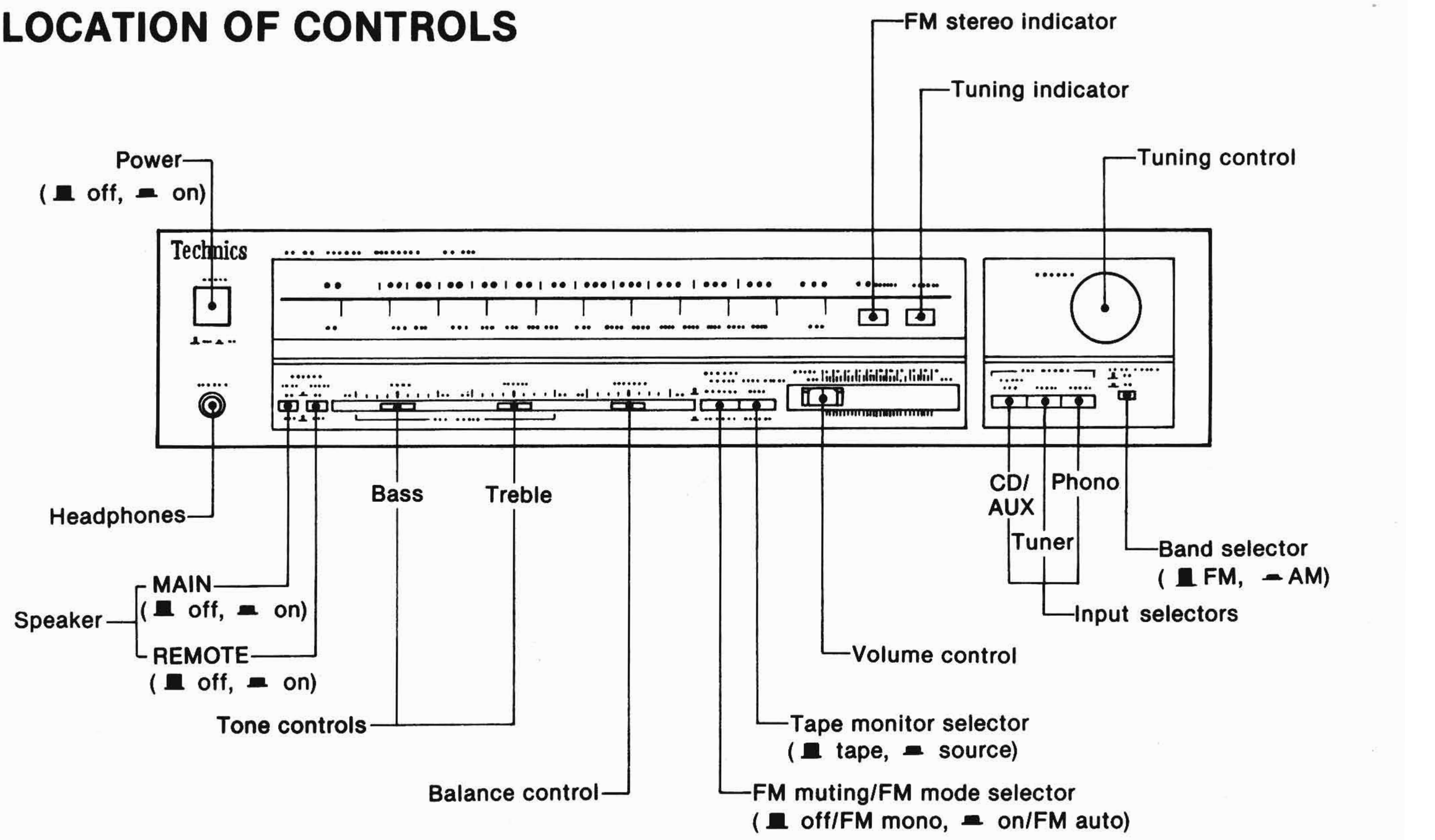
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

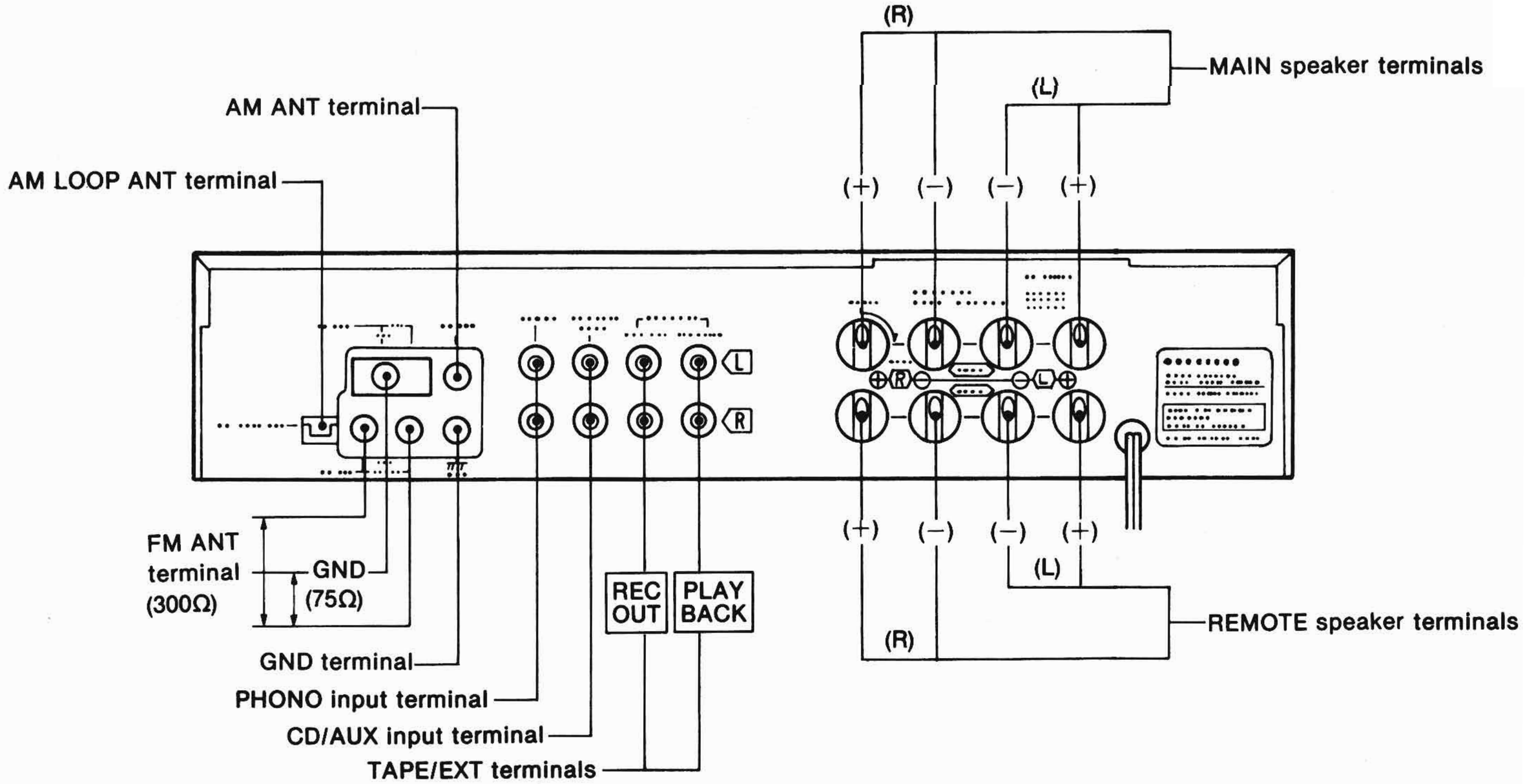
■ BEFORE REPAIR AND ADJUSTMENT

1. Turn off the power supply and short-circuit both ends of the power supply capacitors (C701, C702, 4700μF) with a resistor (about 10Ω, 5W) to discharge the charged voltage. Do not short both ends of C701 and C702 with a screwdriver. It may damage the component.
2. Before turning on the power supply after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current is free of abnormality. The consumed current at 50Hz in no signal mode is shown below with respect to supply voltage 220V.

Power supply voltage		**AC 220V**
Current consumed	50/60Hz	50~150mA

■ LOCATION OF CONTROLS

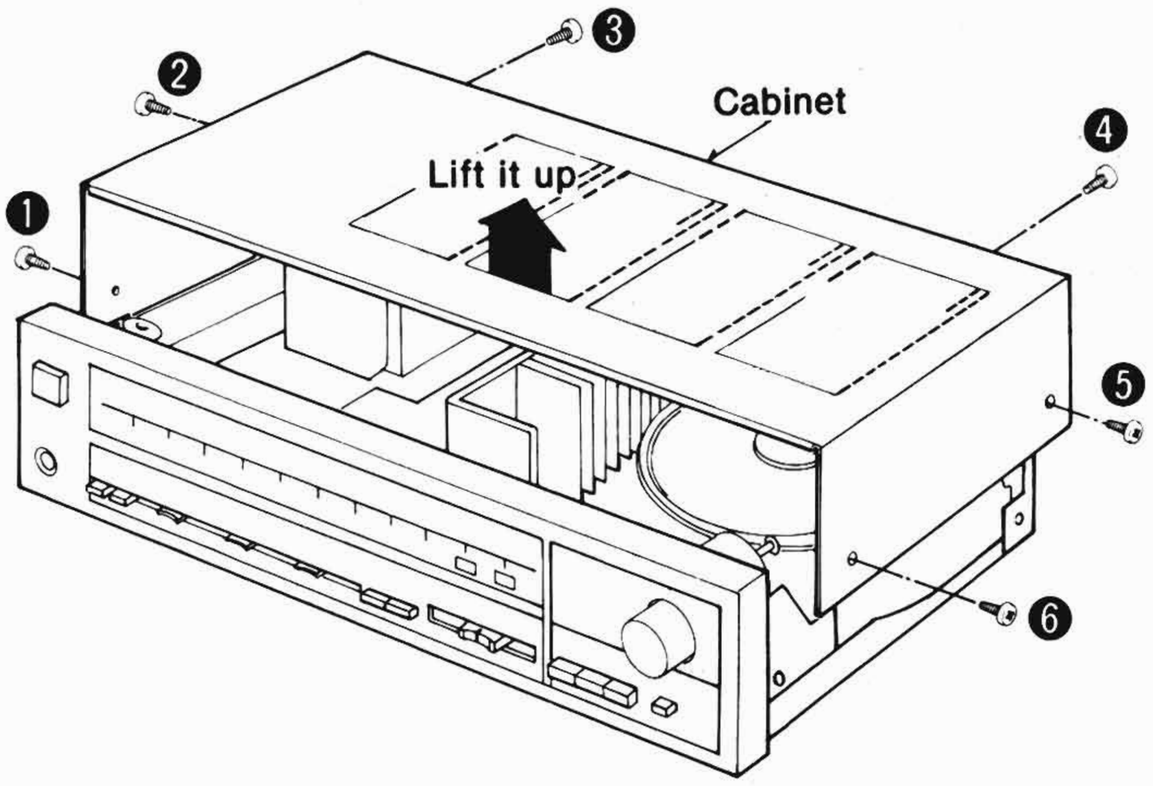




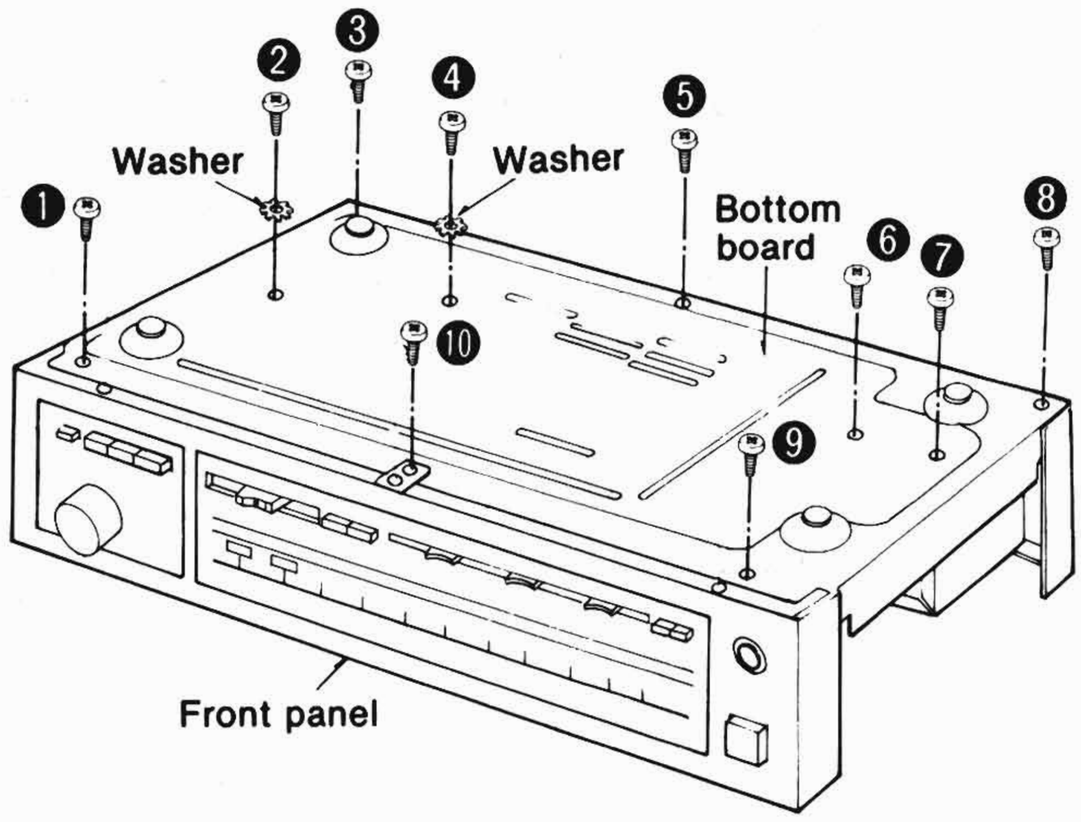
- Phono input capacitance is about 150pF.
- Series connection method is employed for the main and remote speaker connections of this set.
  Therefore, if both speaker changeover switches (main and remote) are turned "on" with the speaker unit connected only to main or remote speaker terminal, then no output signal will be delivered from the speaker unit.
- The power supply for this unit varies depending upon the areas.
  Also, the parts used for power supply are different.
  ※ 220V (50/60Hz) for continental Europe.

■ DISASSEMBLY INSTRUCTIONS

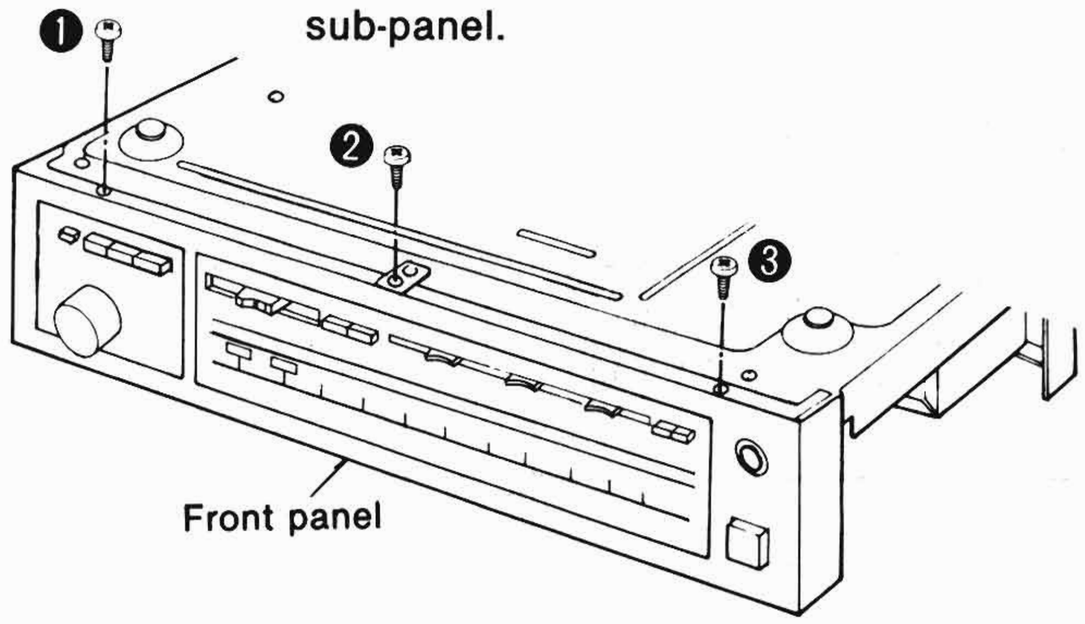
Ref. No. 1	How to remove the cabinet
Procedure 1	1. Remove the 6 setscrews (❶~❻) of the cabinet.

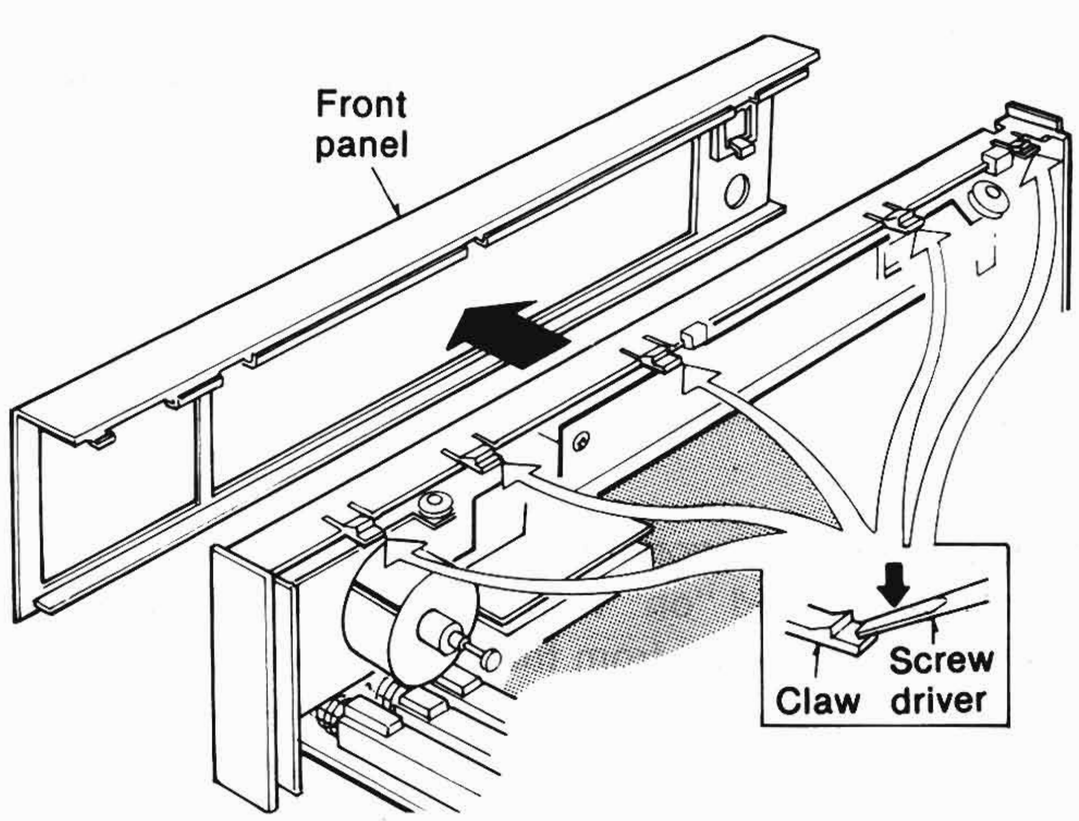


Ref. No. 2	How to remove the bottom board
Procedure 1 → 2	1. Remove the 10 setscrews (❶~⑩) of the bottom board.

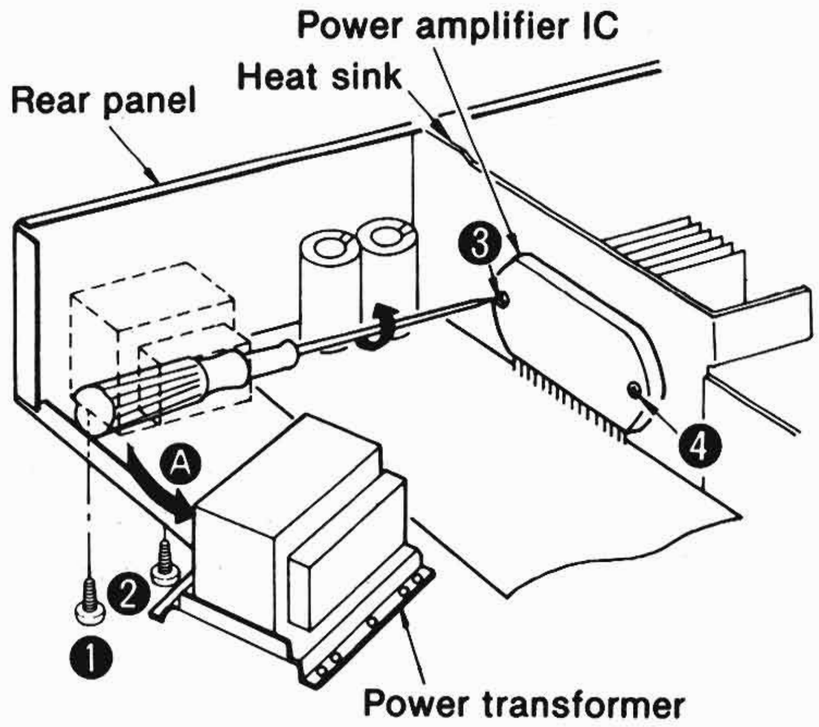


Ref. No. 3	How to remove the front panel
Procedure 1 → 3	1. Remove the 3 setscrews (❶~❸) of the front panel. 2. The claws projected (at 5 portions) from the front panel are engaged with the front sub-panel. Disengage the claws from by screw-driver or the like to remove the front sub-panel.



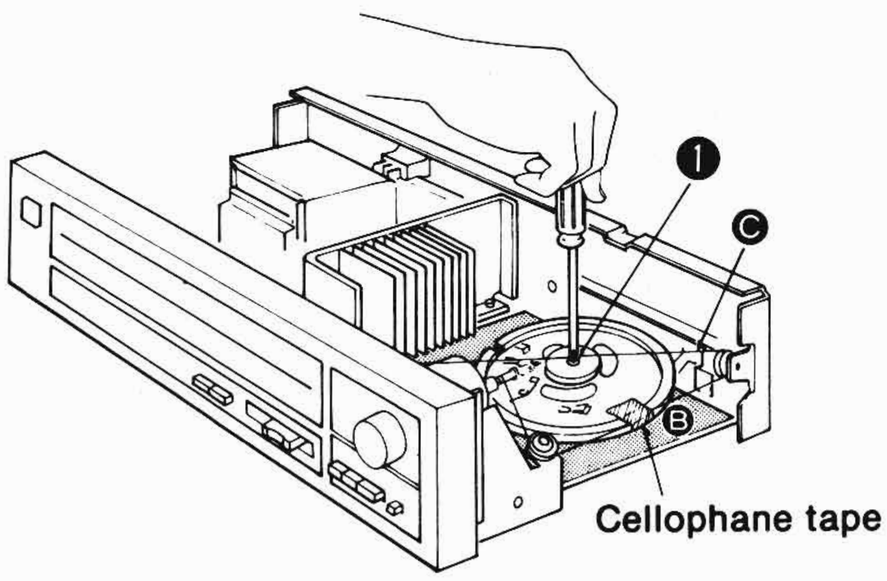


Ref. No. 4	How to remove the power amplifier IC
Procedure 1 → 2 → 4	1. Remove the 2 setscrews (❶, ❷) to detach the power transformer from rear panel in the direction of arrow Ⓐ. 2. Unsolder of power amplifier IC. 3. Remove the 2 setscrews (❸, ❹) used to secure the power amplifier IC on the heat sink, and then pull the power amplifier IC. 4. When mounting the power amplifier IC, apply silicone compound (SZZ0L15) to the rear side of power amplifier IC, and then follow the steps 1~3 reversely.

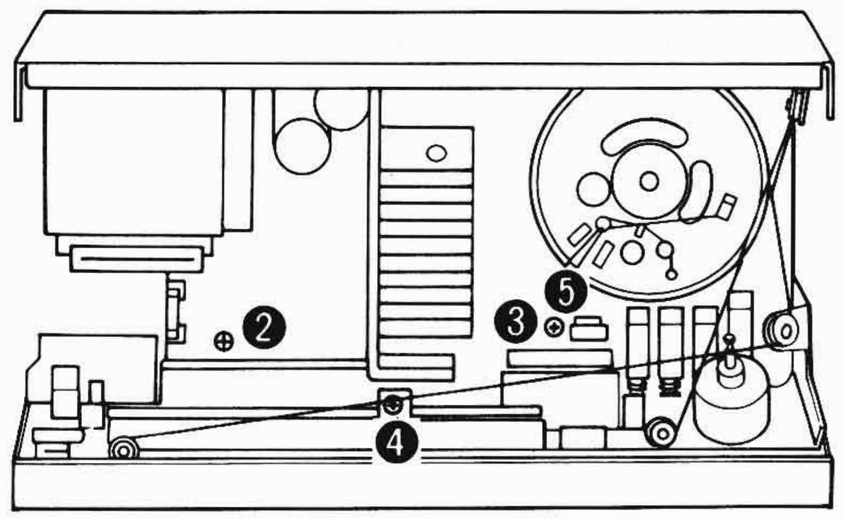


Ref. No. 5	**How to remove the slide volume.**
Procedure 1 → 2 → 5	

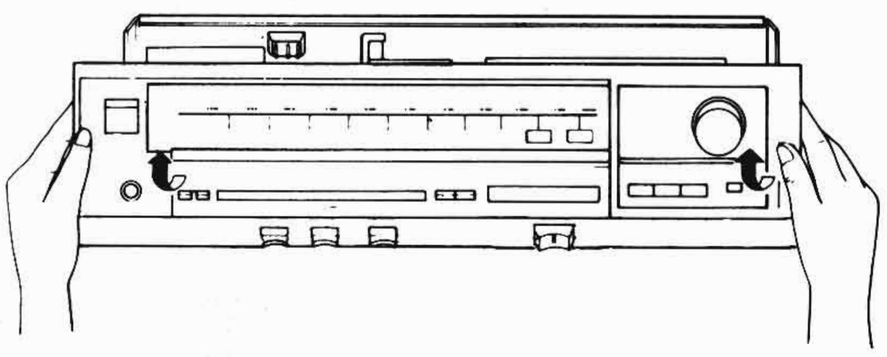
1. Set the dial to the start position (minimum frequency) then stick a cellophane tape to the contact Ⓑ of dial cord so that the dial drum will not come loose from the dial cord.
2. Remove the 1 setscrew (❶) from the dial drum.
3. Remove the dial cord from the pulley. (Ⓒ)



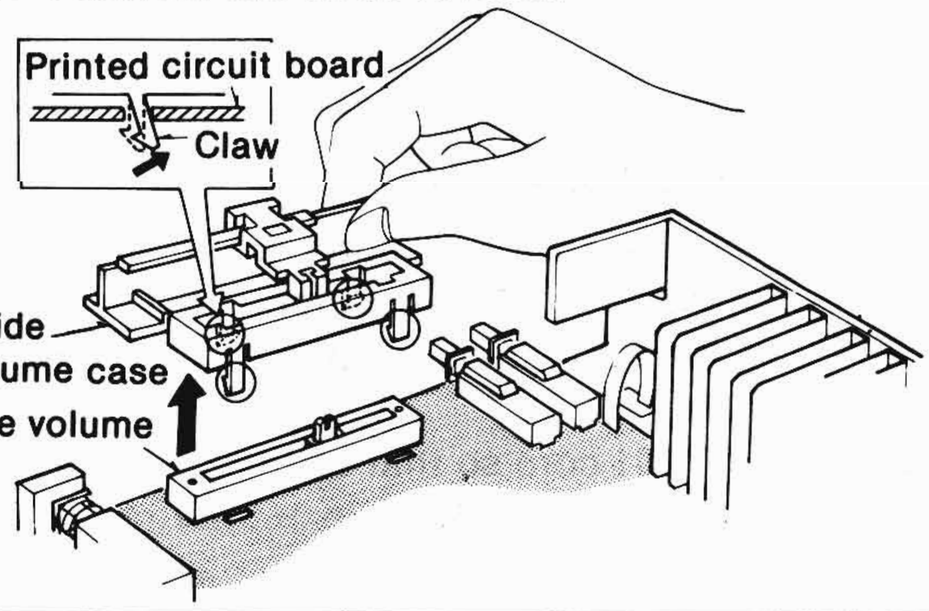
4. Remove the 3 setscrews (❷~❹) and 1 connector. (❺)



5. Remove the front panel in the direction of the arrow.



6. The claws projected (at 4 portions) from the slide volume printed circuit board are engaged with the slide volume.
7. Unsolder the slide volume.



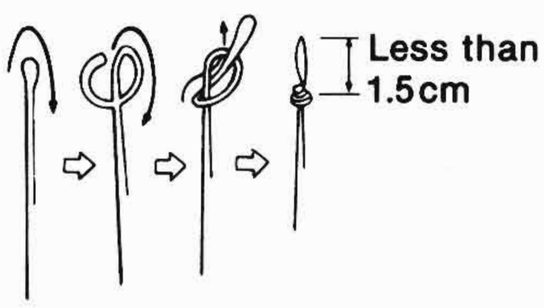
■ DIAL CORD INSTALLATION GUIDE

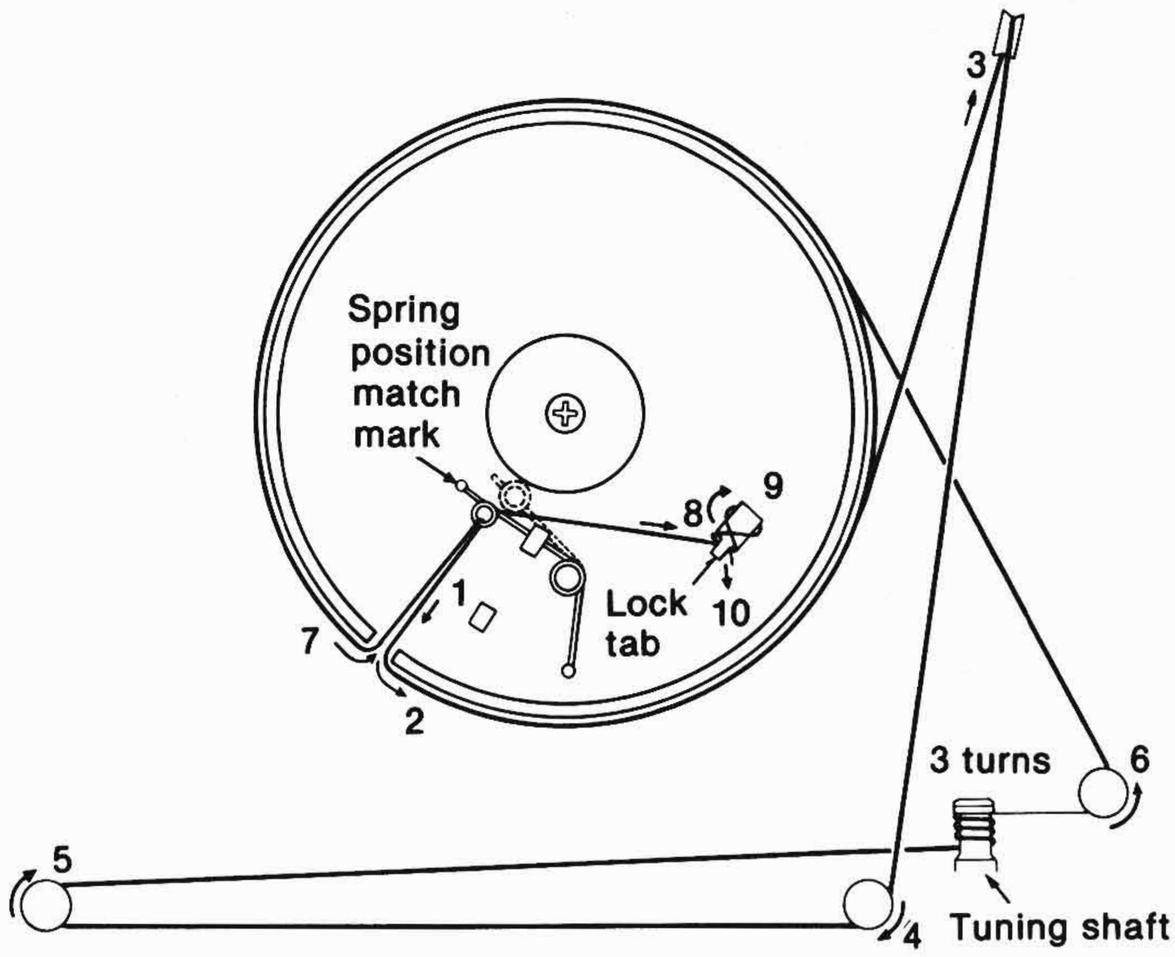
- **When setting the cord, follow the procedure given below**

1. The cord should be at least 180cm long.
2. Completely turn the tuning gang (variable capacitor) counterclockwise. (Variable capacity: max. Frequency; min.)
3. Make a knot at the cord and as shown in Figure.
4. Set the spring to the knot, and set the cord in the order of 1—10.

Note: At step 7, pull the cord strongly, slacken the spring up to the mark of the durm, then go to steps 9—10 to set the cord.

5. Fix the cord terminal with adhesive.
6. Cut off the cord about 0.5cm at its either end.





■ MEASUREMENTS AND ADJUSTMENTS

• AM/FM

Control positions and equipment used

- AM and FM signal generators (AM and FM-SG).
- Stereo modulator
- Distortion analyser
- Oscilloscope
- AC and DC electronic voltmeter (EVM)
- Frequency counter
- Choke coil (100 µH)
- Resistor (100 kΩ)
- Ceramic capacitor (200 pF)

Note: For **T202** (AM-IFT) and **L201**(FM ANT coil), adjusted parts are supplied. So, do not turn the cores of these parts.

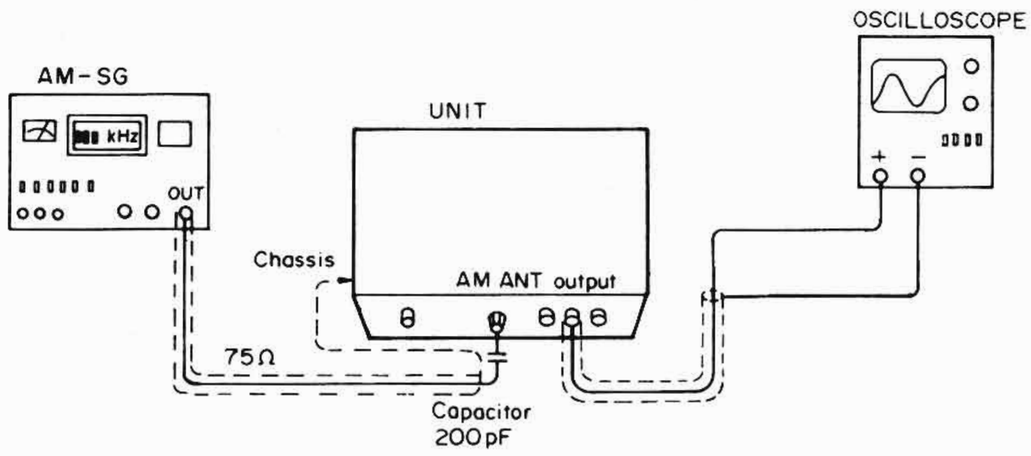
AM-RF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "**AM**" position.
3. Place the radio frequency display and signal generator setting to **600 kHz**.
4. Adjust **L205** and **L206** for maximum output.
5. Place the radio frequency display and signal generator setting to **1500 kHz**.
6. Adjust **CT204** and **CT203** for maximum output.
7. Repeat steps 3.~6.

Note:

Antenna input level must be as low as possible being free from AGC.

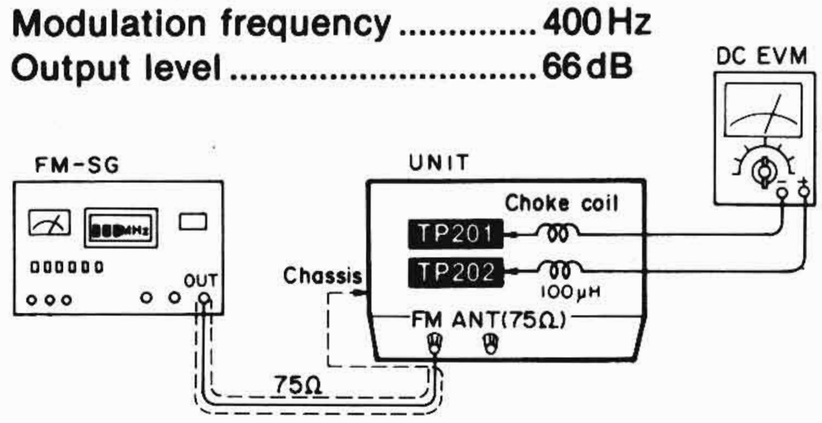
AM SIGNAL GENERATOR CONDITION
Modulation..... 30%
Modulation frequency ..... 400 Hz



FM-IF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "**FM**" position.
3. Place the radio dial and signal generator setting to **100 MHz**.
4. Adjust **T201** core so that voltage measured in signal mode is **0 mV (0±50 mV)** in **150 mV** range.

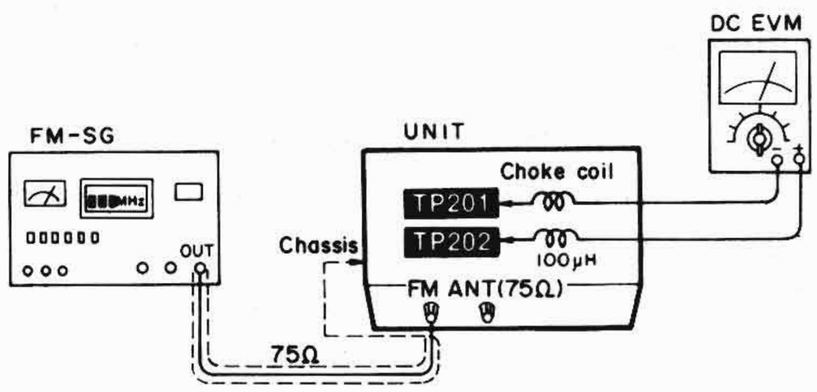
FM SIGNAL GENERATOR CONDITION
Modulation..... 100%
Modulation frequency ..... 400 Hz
Output level ..... 66 dB



FM-RF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "**FM**" position.
3. Place the radio dial and signal generator setting to **90 MHz**. Add weak input so that noise is included in the output waveform.
4. Adjust **L204** and **L202** so that the output waveform is vertically symmetrical.
5. Place the radio dial and signal generator setting to **106 MHz**.
6. Adjust **CT202** so that the output waveform is vertically symmetrical.
7. Repeat steps 3.~6.

FM SIGNAL GENERATOR CONDITION
Modulation..... 100%
Modulation frequency ..... 400 Hz
Output level ..... 66 dB



MPX VCO ADJUSTMENT

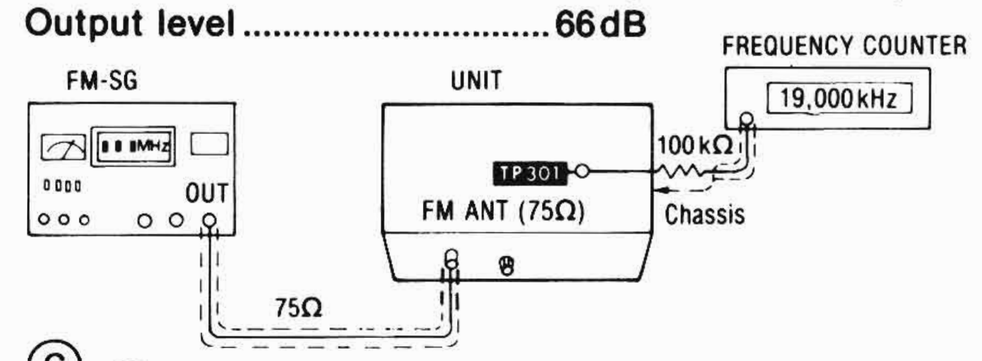
1. Test equipment connection is shown in figure.
2. Set the unit to "**on/auto**" position.
3. Place the radio dial and signal genarator setting to **100MHz.**
4. Adjust **VR301** for **19kHz±30Hz** on frequency counter reading.

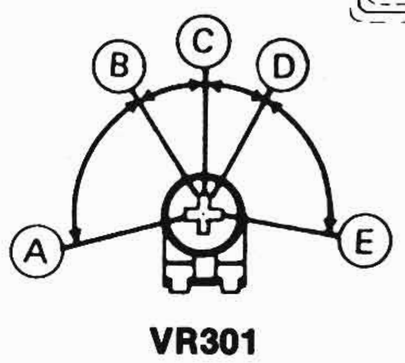
★ USING ALTERNATE SYSTEM

1. Apply stereo signal from generator or receive the stereo broadcast.
2. Adjust **VR301** until stereo indicator lights up. Cement arm of **VR301** as shown in figure.

FM SIGNAL GENERATOR CONDITION

Modulation.....0% (non-moduration)
Output level 66dB

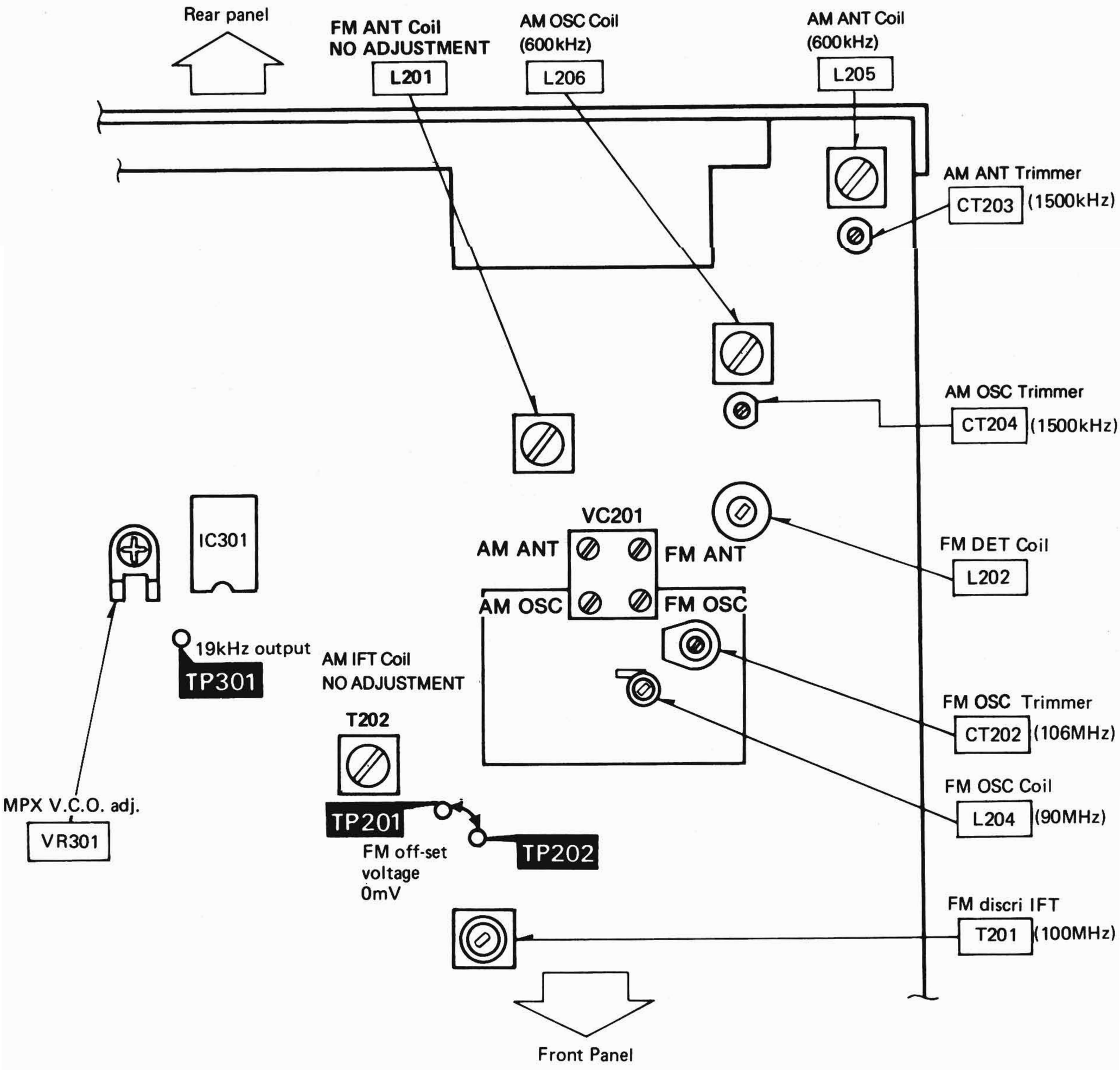




VR301

Ⓐ – Ⓑ , Ⓓ – Ⓔ : Stereo OFF Position
Ⓑ – Ⓓ : Stereo ON Position **(Indicator lighting)**
Ⓒ : Adjust Point of Pilot Circuit

● Adjustment points



■ RESISTORS & CAPACITORS

Notes:
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
- The unit of resistance is Ω. (ohm) K=1000Ω, M=1000kΩ.
- The unit of capacitance is μF. (microfarad) P=10^{-6}μF.

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
ERD : Carbon ERX : Metal Film ERG : Metal Oxide	25 : 1/4W S1 : 1/2W 1 : 1W 2 : 2W	J : ±5%

Numbering System of Capacitor

Example

ECKD	1H	102	M	D
Type	Voltage	Value	Tolerance	Peculiarity

ECEA	50	M	R47	R
Type	Voltage	Peculiarity use	Value	Special use

Capacitor Type	Voltage		Tolerance
	ECEA Type	Others	
ECEA : Electrolytic ECCD : Ceramic ECKD : Ceramic ECQM : Polyester ECQP : Polypropylene ECET : Electrolytic ECQE : Polyester	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V 42 : 42V 1H : 50V 50 : 50V	1H : 50V DC KC : 400V AC	C : ±0.25pF J : ±5% K : ±10% Z : +80%, −20% P : +100%, −0%

● RESISTORS

Ref. No.	Part No.	Value
R201	ERD25FJ102	1K
R202	ERD25FJ220	22
R203	ERD25FJ221	220
R204	ERD25TJ474	470K
R205	ERD25FJ471	470
R206	ERD25TJ123	12K
R207	ERD25FJ822	8.2K
R208	ERD25FJ102	1K
R209	ERD25FJ562	5.6K
R210	ERD25TJ224	220K
R211	ERD25FJ472	4.7K
R212	ERD25FJ152	1.5K
R213	ERD25TJ564	560K
R214	ERD25TJ684	680K
R215	ERD25FJ471	470
R216	ERD25TJ824	820K
R217	ERD25FJ152	1.5K
R218	ERD25FJ122	1.2K
R220	ERD25FJ102	1K
R221	ERD25FJ331	330
R222	ERD25FJ103	10K
R223	ERD25FJ562	5.6K
R224	ERD25FJ103	10K
R225, 226	ERD25FJ472	4.7K
R227	ERD25TJ154	150K
R228	ERD25FJ122	1.2K
R229	ERD25FJ821	820
R230	ERD25FJ471	470
R231	ERD25FJ102	1K
R232	ERD25FJ151	150
R301, 302	ERD25FJ103	10K
R303	ERD25TJ104	100K
R304	ERD25FJ470	47
R305, 306	ERD25TJ223	22K
R307, 308	ERD25FJ222	2.2K
R309, 310	ERD25TJ333	33K
R311	ERD25TJ334	330K
R312	ERD25TJ153	15K
R314	ERD25FJ561	560
R315	ERD25FJ102	1K
R401, 402	ERD25FJ391	390
R403, 404	ERD25TJ224	220K
R405, 406	ERD25TJ563	56K
R407, 408	ERD25FJ271	270
R409, 410	ERD25FJ680	68
R411, 412	ERD25TJ184	180K
R413, 414	ERD25TJ123	12K
R415, 416	ERD25TJ563	56K
R417, 418	ERD25FJ102	1K
R419, 420	ERD25FJ100	10
R501, 502	ERD25FJ222	2.2K
R503, 504	ERD25FJ222	2.2K
R505, 506	ERD25FJ561	560

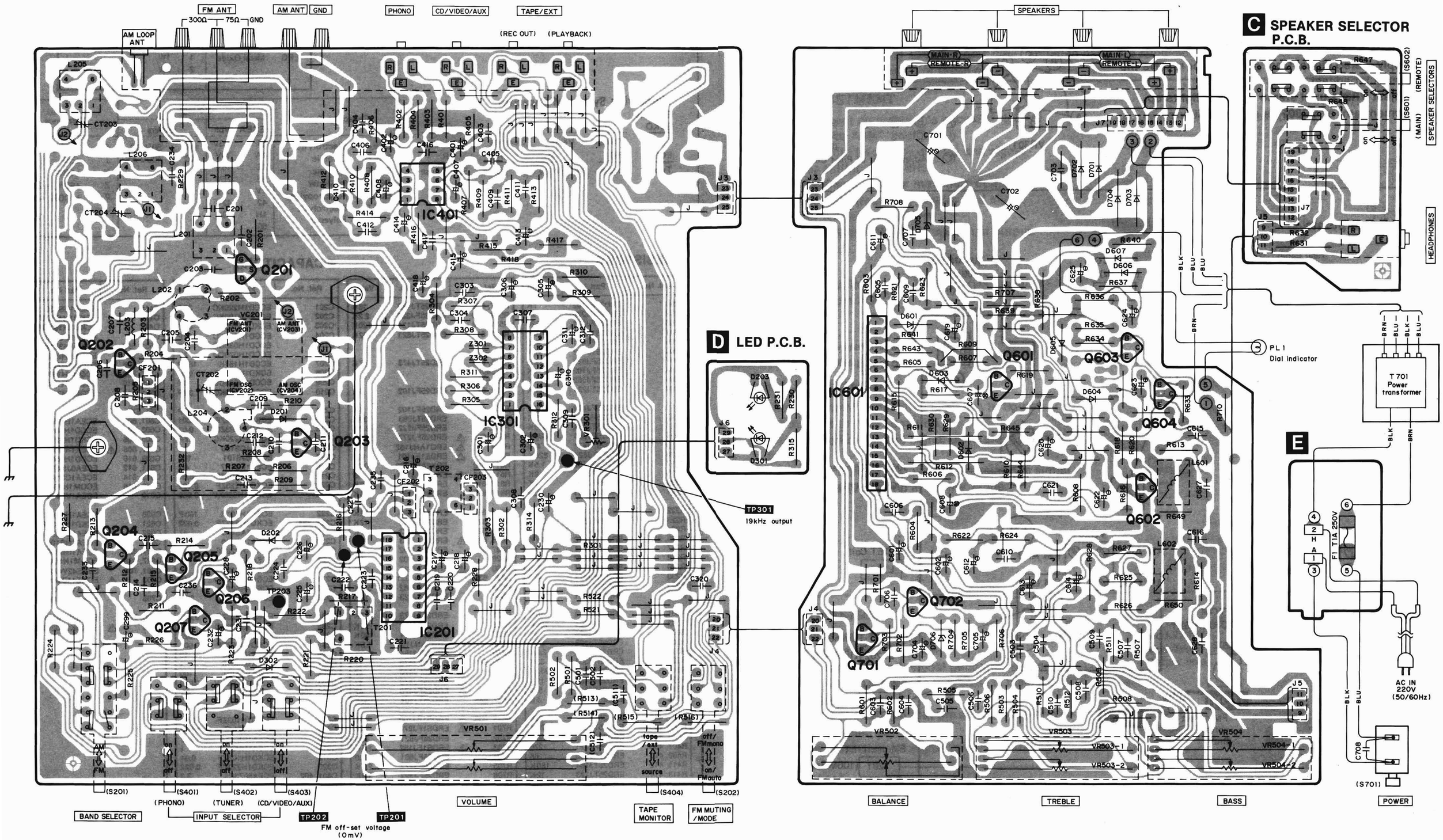
Ref. No.	Part No.	Value
R507, 508	ERD25TJ183	18K
R509, 510	ERD25FJ222	2.2K
R511, 512	ERD25TJ124	120K
R513, 514 Except [Ei, EX]	ERD25TJ823	82K
R515, 516 Except [Ei, EX]	ERD25TJ473	47K
R521, 522	ERD25FJ102	1K
R601, 602	ERD25FJ102	1K
R603, 604	ERD25TJ393	39K
R605, 606	ERD25FJ222	2.2K
⚠ R607, 608	ERD25FJ272	2.7K
⚠ R609	ERG1ANJ152	1.5K
⚠ R610	ERDS1FJ101	100
R611, 612	ERX2ANJR22	0.22
⚠ R613, 614	ERDS1FJ100	10
R615, 616	ERD25FJ222	2.2K
R617, 618	ERD25TJ153	15K
R619, 620	ERD25TJ123	12K
R621, 622	ERD25TJ123	12K
R623, 624	ERD25TJ473	47K
⚠ R625, 626	ERD25TJ153	15K
R627, 628	ERD25FJ102	1K
R629	ERD25FJ102	1K
⚠ R630	ERD25TJ223	22K
R631, 632	ERG1ANJ331	330
R633	ERD25FJ562	5.6K
R634	ERD25TJ123	12K
R635	ERD25TJ473	47K
R636	ERD25TJ154	150K
R637	ERD25TJ104	100K
R638	ERG1ANJ152	1.5K
R639	ERD25TJ184	180K
⚠ R640, 641	ERD25FJ470	47
⚠ R643	ERD25FJ470	47
⚠ R644	ERD25FJ470	47
⚠ R645	ERD25FJ470	47
R647, 648	ERD25TJ104	100K
⚠ R649, 650	ERDS1FJ100	10
⚠ R701	ERDS1FJ270	27
R702	ERD25FJ821	820
⚠ R703	ERDS1FJ152	1.5K
R704	ERD25FJ681	680
R705	ERD25FJ272	2.7K
R706	ERD25FJ392	3.9K
R707	ERDS1FJ152	1.5K
R708	ERD25FJ221	220
⚠ R710	ERD25FAJ2R2	2.2

● CAPACITORS

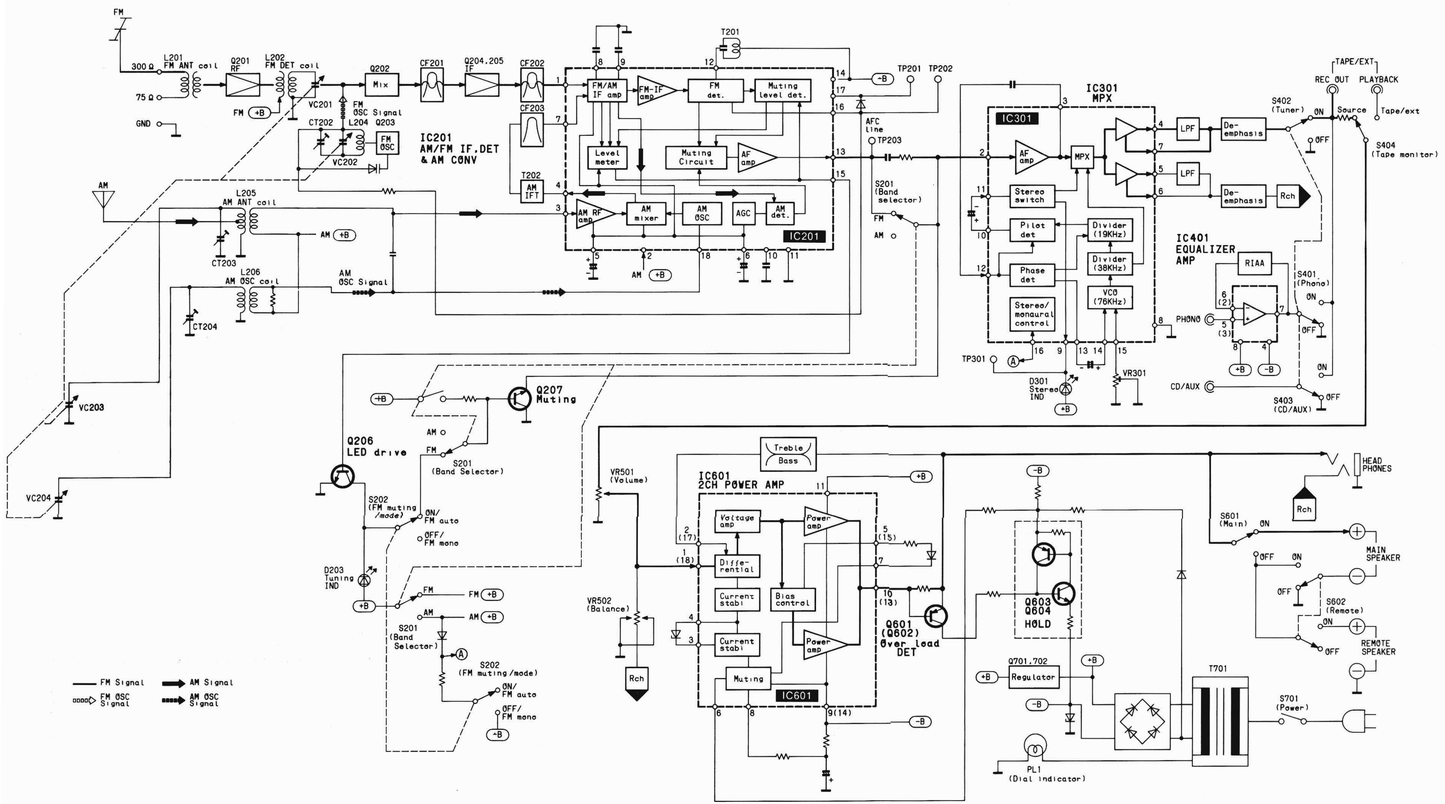
Ref. No.	Part No.	Value
C201	ECCD1H220KC	22P
C202	ECCD1H180KC	18P
C203	ECKD1H103ZF	0.01
C204	ECCD1H220KC	22P
C205	ECCD1H030CC	3P
C206	ECCD1H070CC	7P
C207	ECCD1H181K	180P
C208	ECKD1H103ZF	0.01
C209	ECCD1H080CC	8P
C210	ECCD1H390KC	39P
C211	ECCD1H100KC	10P
C212	ECKD1H102ZF	0.001
C213, 214	ECKD1H103ZF	0.01
C215	ECCD1H220KC	22P
C216	ECEA1CS100	10
C217	ECEA0JS101	100
C218	ECEA1ES4R7	4.7
C219	ECKD1H103ZF	0.01
C220	ECKD1H223ZF	0.022
C221	ECQM1H333KV	0.033
C222	ECCD1H101K	100P
C223, 224	ECKD1H223ZF	0.022
C225	ECEA1AS470	47
C226	ECEA1HS010	1
C227	ECKD1H223ZF	0.022
C228	ECEA1CS100	10
C230	ECEA1CS100	10
C231	ECQM1H183KV	0.018
C232	ECEA1HS2R2	22
C233	ECCD1H270KC	27P
C234	ECKD1H223ZF	0.022
C235	ECGD1H330KC	33P
C236	ECKD1H223ZF	0.022
C245	ECKD1H102ZF	0.001
C299	ECEA1CS100	10
C301	ECEA1HS010	1
C302	ECEA1CS101	100
C303, 304	ECQM1H223KV	0.022
C305, 306	ECEA1ES4R7	4.7
C307	ECQM1H473KV	0.047
C308	ECKD1H103ZF	0.01
C309	ECQP1471JZ	470P
C310	ECEA1HSR47	0.47
C311	ECEA1HU010	1
C312	ECKD1H103ZF	0.01
C320	ECKD1H223ZF	0.022
C401, 402	ECEA50Z3R3	3.3
C403, 404	ECCD1H101K	100P
C405, 406	ECKD1H471KB	470P
C407, 408	ECEA0JS330	33
C409, 410	ECQM1H223KV	0.022
C411, 412	ECQM1H682KV	0.0068
C413, 414	ECEA1HS010	1

Ref. No.	Part No.	Value
C415	ECEA1CS330	33
C416	ECKD1H473ZF	0.047
C417	ECKD1H103ZF	0.01
C418	ECEA1CS330	33
C501, 502	ECKD1H331KB	330P
C503, 504	ECQM1H222KV	0.0022
C505, 506	ECQM1H223KV	0.022
C507, 508	ECQM1H183KV	0.018
C509, 510	ECQM1H104KV	0.1
C511, 512 Except [Ei, EX]	ECQM1H333KV	0.033
C601, 602	ECEA1HS2R2	2.2
C603, 604	ECCD1H101K	100P
C605, 606	ECKD1H221KB	220P
⚠ C607, 608	ECEA1HN3R3S	3.3
C609, 610	ECCD1H050CC	5P
C611, 612	ECEA0JS470	47
C613, 614	ECEA1CS100	10
C615, 616	ECQM1H104KV	0.1
C619	ECEA1VS470	47
C620	ECEA1HS101	100
C621	ECKD1H103ZF	0.01
C622	ECEA1HS330	33
C623	ECEA1HS100	10
C624, 625	ECEA1HS330	33
C627, 628	ECQM1H104KV	0.1
C701, 702	ECES42V472Z	0.0047
⚠ C703	ECQE1104KN	0.1
C704	ECEA1ES101	100
C705	ECEA1CS100	10
C706, 707	ECKD1H103ZF	0.01
⚠ C708	ECKDKC103PF2	0.01

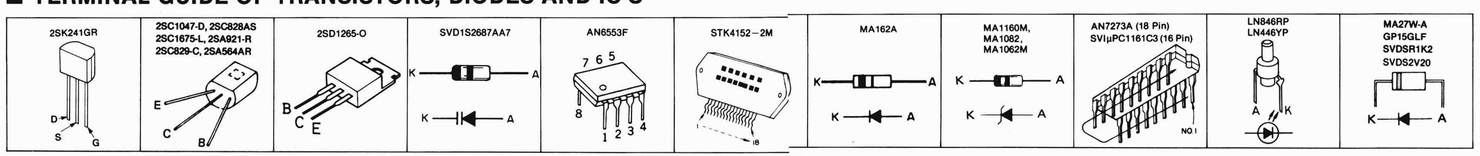
■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



■ BLOCK DIAGRAM



■ TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S



■ REPLACEMENT PARTS LIST

Notes:
- Part numbers are indicated on most mechanical parts. Please use this part unmber for parts orders.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components, use only manufacturer's specified parts.
- The parenthesized numbers in the column of description stand for the quantity per set.
- Bracketed indications in Ref. No. columns specify the areas. Parts without these indications can be used for all areas.
- Ⓚ-marked parts are used for black only, while ○-marked parts are for silver type only.
- Part other then Ⓚ- and ○-marked are use for both black and silver type.

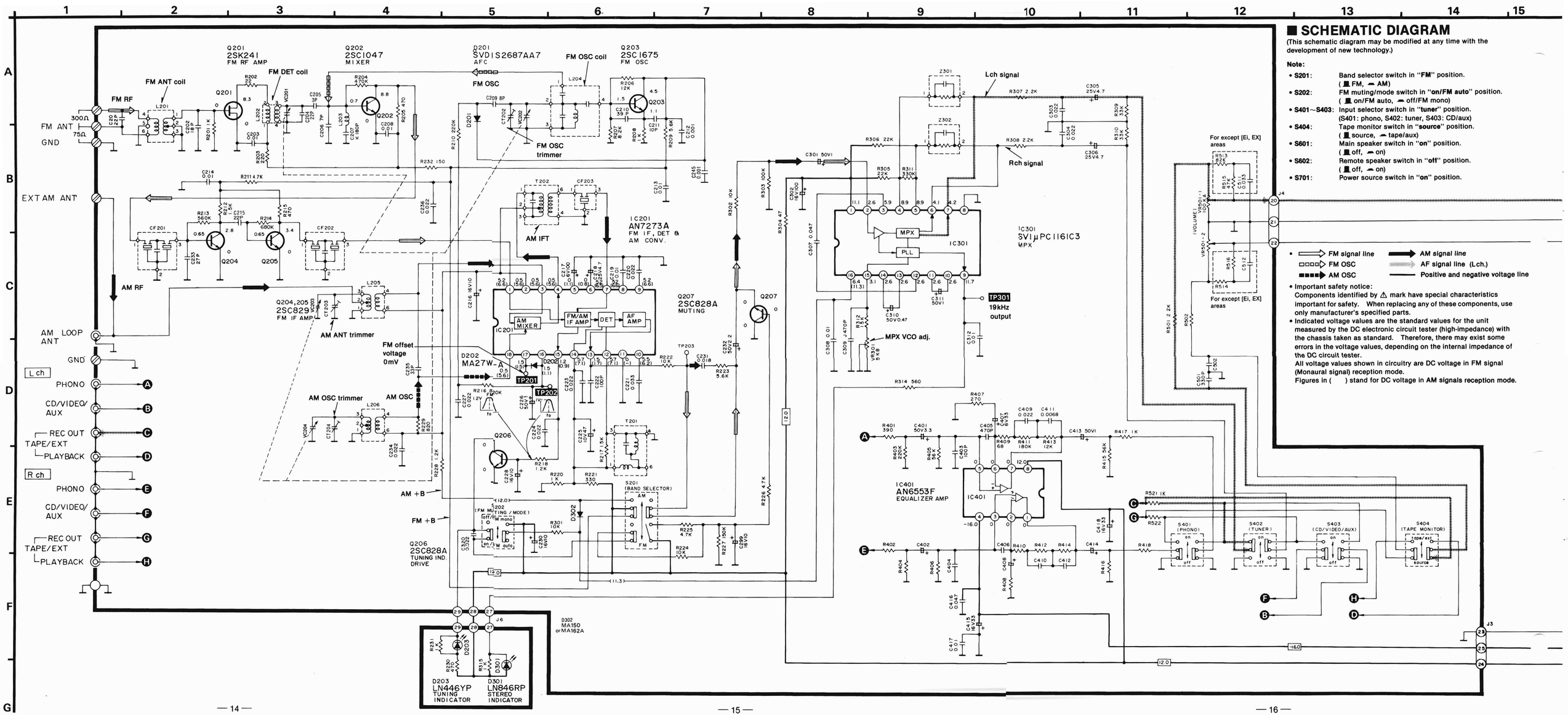
Ref. No.		Part No.	Description
INTEGRATED CIRCUITS			
IC201		AN7273A	IC
IC301		SVIUPC1161C3	IC
IC401		AN6553F	IC
IC601	⚠	STK4152−2M	IC
TRANSISTORS			
Q201		2SK241−GR	Transistor
Q202		2SC1047−D	Transistor
Q203		2SC1675−L	Transistor
Q204, 205		2SC829−C	Transistor
Q206, 207, 604, 702		2SC828AS	Transistor
Q601, 602		2SA921−R	Transistor
Q603		2SA564AR	Transistor
Q701		2SD1265−O	Transistor
DIODES			
D201		SVD1S2687AA7	FM AFC
D202		MA27W−A	
D203		LN446YP	L.E.D. (Tuning)
D301		LN846RP	L.E.D. (Stereo)
D302, 602−606		MA162A	Switching
D601		MA1082	Zener, 8.2V
D607	⚠	SVDSR1K2	Rectifier
D701−704	⚠	SVDS20V20	Rectifier
D705		MA1160M	Zener, 16V
D706		MA1062M	Zener, 6.2V
COILS			
L201		SLA4N39	FM Antenna
L202		SLD4P71−P	FM Detector
L203		SLQZ12G1−D	Choke
L204		*SLO4P121−P*	*FM Oscillator*
L205		SLA2C9−P	AM Antenna
L206		SLO2C33−P	AM Oscillator
L601, 602		SLQY07G−30	Choke
TRANSFORMERS			
T201		SLI4C539−P	FM IFT
T202		SLI2C139−M	AM IFT
T701	⚠	SLT5M383	Power Source (MESA)
CERAMIC FILTERS			
CF201, 202		SVFE107MS8A	FM, 10.7MHz (Red)
		SVFE107MS8B	FM, 10.675MHz (Blue)
		SVFE107MS8C	FM, 10.725MHz (Orange)
		SVFE107MS8D	FM, 10.650MHz (Black)
		SVFE107MS8E	FM, 10.750MHz (White)
CF203		SVFSFU450B3	AM, 450kHz

Ref. No.		Part No.	Description
VARIABLE RESISTORS			
VR301		EVN75AA00B53	VCO Adjustment, 5kΩ (B)
VR501		EWE00605A15S	Volume Control, 100kΩ (A)
VR502		EVD00305G15S	Balance Control, 100kΩ (G)
VR503, 504		EWD00205C15S	Tone Control, 100kΩ (C)
VARIABLE CAPACITORS			
CT202		ECV1ZW10X32E	Trimmer, FM OSC
CT203		ECRHA007A11	Trimmer, AM Antenna
CT204		ECRHA010A11	Trimmer, AM OSC
VC201−204		SVCCB41T914	Tuning Gang
COMPONENT COMBINATIONS			
Z301, 302		EXRP181K473C	180pF, 47kΩ
LAMP			
PL1	⚠	XAMR78S250	12V, 0.22A
FUSE			
F1	⚠	XBA2C10TRO	Power Source, 250V, T1A
SWITCHES			
S201		SSH1151	Band Selector (FM/AM)
S202, 403		SSH1031	Mode, Tape Monitor
S401, 402, 404		SSH3069	Input Selector
S601		SSH1149	Speaker (Main)
S602		SSH1073	Speaker (Remote)
S701	⚠	SSH1071	Power Source

Ref. No.		Part No.	Description	
CABINET and CHASSIS PARTS				
1		SUS305	Bracket	(1)
2	○	SGWA130−SE	Front Panel, Ass'y (MESA)	(1)
2	Ⓚ	SGWA130−KE	Front Panel, Ass'y (MESA)	(1)
3		SGU333−19	Dial Scale (MESA)	(1)
4	○	SBN1091	Knob, Tuning	(1)
4	Ⓚ	SBN1091−3	Knob, Tuning (MESA)	(1)
5	○	SGX7657−9	Front Sub Panel (MESA)	(1)
5	Ⓚ	SGX7657−8	Front Sub Panel (MESA)	(1)
6	○	SBD69−2T	Knob, Tone	(3)
6	Ⓚ	SBD69−5	Knob, Tone	(3)
7	○	SBC627	Power Button	(1)
7	Ⓚ	SBC666−3	Power Button	(1)
8		SHG6363	Spacer, Button	(1)
9		SUS257	Spring, Button	(8)
10	○	SBC583−1T	Button, Input Selector	(3)
10	Ⓚ	SBC583−2T	Button, Input Selector (MESA)	(3)

Ref. No.		Part No.	Description	
CABINET and CHASSIS PARTS				
12		SUR152M	Bracket, Tuning Shaft (MESA)	(1)
13		SHR5253	Spacer, Drum	(1)
14		SDD105−2	Drum, Dial	(1)
15		SUS295−1	Spring, Dial Drum	(1)
16		SDZ051−2	Cord, Dial	(1.8m)
17		SDT8095−1M	Tuning Shaft (MESA)	(1)
18		SDR31	Roller, Dial	(4)
20		SHR411	Lock Pin	(2)
21	○	SBD77T	Knob, Volume	(1)
21	Ⓚ	SBD77−2T	Knob, Volume (MESA)	(1)
22	○	SBZ657−2	Slider (MESA)	(1)
22	Ⓚ	SBZ657−3	Slider (MESA)	(1)
23	○	SBC423T	Button	(2)
23	Ⓚ	SBC423−3T	Button (MESA)	(2)
24	○	SHR9727−1	Sheet (MESA)	(1)
24	Ⓚ	SHR9727	Sheet	(1)
25	○	SBC483−6T	Button, Speaker	(3)
25	Ⓚ	SBC483−10T	Button, Speaker	(3)
26		SUG181	Guide, Pointer	(1)
28	○	SBZ663−1	Slider	(3)
28	Ⓚ	SBZ663−3	Slider (MESA)	(3)
29		SHP59	Spacer, Pointer	(1)
30		SDP1167−2	Dial, Pointer (MESA)	(1)
31		*SJJ71B*	*Jack, Headphone*	*(1)*
32		SUW1989	Bracket	(1)
33	○	SKCA121−SM	Cabinet	(1)
33	Ⓚ	SKCA121−KC	Cabinet	(1)
34		SKUA120−SE	Bottom Board	(1)
(34-1		(SKL245−2	Foot	(4)
35		SJF8035−8N	Terminal Board	(1)
36		SJF4815−2	Terminal Board	(1)
37 [EX, EH]		SGP6130−2F	Rear Panel (MESA)	(1)
37 [EI]		SGP6130−2J	Rear Panel (MESA)	(1)
39		SHR127	Bushing, AC Cord	(1)
40	⚠	SFDAB31E01	AC Cord	(1)
41		SJT347	Fuse Holder	(2)
42		SJT30343−V	Socket	(1)
43		SMN1823	Bracket, P.C.B	(1)
44		SMX435	Insulation Cover	(1)
SCREWS, WASHERS and NUT				
N1		XTBS3+8JFZ1	Tapping, ⊕3×8	(11)
N2		XTB3+8JFR	Tapping, ⊕3×8	(8)
N3		XTW3+8T	Tapping, ⊖3×8	(1)
N4		XTB3+8G	Tapping, ⊖3×8	(8)
N5		XSN26+C5FZ	Tapping, ⊕2.6×5	(1)
N6		XSN3+8FR	Tapping, ⊖3×8	(2)
N7		XTB3+16JFZ	Tapping, ⊖3×16	(2)
N8	○	SNE2095−4	Cabinet	(4)
N8	Ⓚ	SNE2095−5	Cabinet	(4)
N9	○	XTB3+8JFN	Tapping, ⊖3×8	(2)
N9	Ⓚ	XTB3+8JFZ	Tapping, ⊖3×8	(2)
N10		SHW14E100M	Knob (MESA)	(8)
N11		XWD11A	External Toothed Lock, φ11	(1)
N12		XWG3	Plain, φ3	(1)
N13		XWA26BFZ	Spring, φ2.6	(1)
N14		XWC3B	External Toothed Lock, φ3	(2)
N15		XNS11	φ11	(1)
N16		XTB3+8JFR	Tapping, ⊖3×8	(1)
N17		XTBS3+8BFZ1	Tapping, ⊖3×8	(2)
N18		XTW3+8T	Tapping, ⊖3×8	(1)
N19		XTB3+8J	Tapping, ⊖3×8	(1)

Ref. No.		Part No.	Description	
ACCESSORIES				
A1		SSA269	Cord, FM Antenna	(1)
A2		SSA902−5	Loop Antenna	(1)
A3		SMA231	Holder	(1)
A4		SMA233−1	Holder	(1)
A5		XTN3+10AFZ	Screw, Loop Antenna Holder	(2)
A6 [EH]		SQF12624	Instruction Book (MESA)	(1)
A6 [EI]		SQF12625	Instruction Book (MESA)	(1)
A6 [EX]		SQF12626	Instruction Book (MESA)	(1)
PACKING PARTS				
P1	○	SPP699	Polyethylene Bag	(1)
P1	Ⓚ	SPP649	Polyethylene Bag	(1)
P2		SPS4039	Pad, Front Side	(1)
P3		SPS3515−3M	Pad, Left Side (MESA)	(1)
P4		SPS3517−2M	Pad, Right Side (MESA)	(1)
P5 [EX, EH]	○	SPG5497	Carton Box (MESA)	(1)
P5 [EX, EH]	Ⓚ	SPG5498	Carton Box (MESA)	(1)
P5 [EI]		SPG5503	Carton Box (MESA)	(1)



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Note:

- **S201:** Band selector switch in "**FM**" position. (▟ FM, ▰ AM)
- **S202:** FM muting/mode switch in "**on/FM auto**" position. (▟ on/FM auto, ▰ off/FM mono)
- **S401~S403:** Input selector switch in "**tuner**" position. (S401: phono, S402: tuner, S403: CD/aux)
- **S404:** Tape monitor switch in "**source**" position. (▟ source, ▰ tape/aux)
- **S601:** Main speaker switch in "**on**" position. (▟ off, ▰ on)
- **S602:** Remote speaker switch in "**off**" position. (▟ off, ▰ on)
- **S701:** Power source switch in "**on**" position.

- ⟹ FM signal line
- ⟹ AM signal line
- ⟹ FM OSC
- ⟹ AF signal line (Lch.)
- ⟹ AM OSC
- ⟹ Positive and negative voltage line

- Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester. All voltage values shown in circuitry are DC voltage in FM signal (Monaural signal) reception mode. Figures in ( ) stand for DC voltage in AM signals reception mode.

16 17 18 19 20 21 22 23 24

A B C D E F G

△IC601
STK4152-2M
2CH POWER AMP

D601
MA1082
8.2V ZENER

D602
MA162

Series connection method is employed for the main and remote speaker connections of this set. Therefore, if both speaker changeover switches (main and remote) are turned "on" with the speaker unit connected only to main or remote speaker terminal, then no output signal will be delivered from the speaker unit.

Q601, 602
2SA921
OVER LOAD DET

D603, 604
MA162

D605, 606
MA162

Q603
2SA564A
HOLD

Q604
2SC828A
HOLD

D607
SVDSR1K2
RECTIFIER

Q701
2SD1265
REGULATOR

Q702
2SC828A
REGULATOR

D706
MA1062M
6.2V ZENER

D701 ~ D704
GP15GLF
RECTIFIER

D705
MA1160M
16V ZENER

Balance

Lch. Treble Control

Rch. Treble Control

Lch. Bass Control

Rch. Bass Control

HEADPHONES

L ch MAIN R ch SPEAKERS

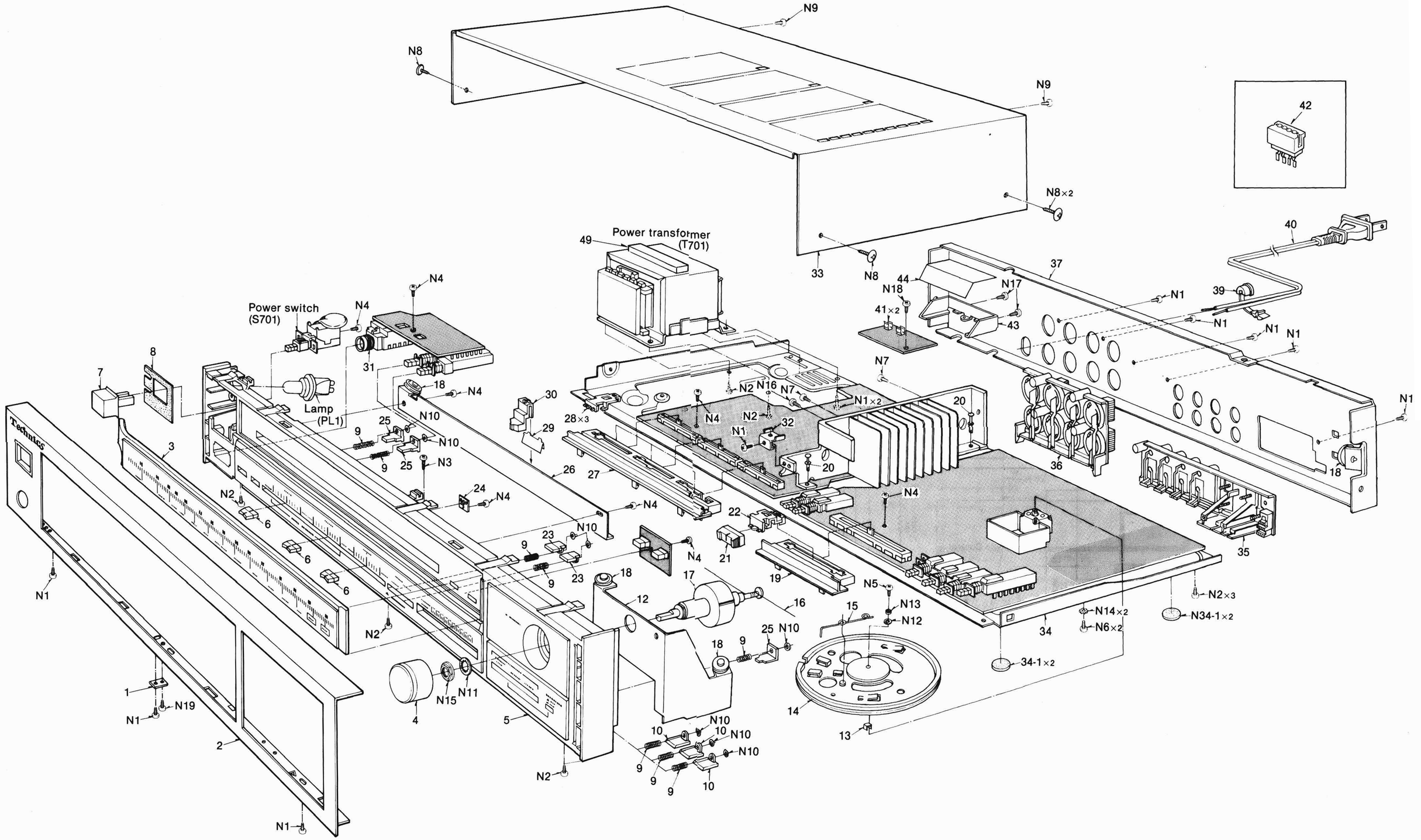
L ch REMOTE R ch

Power "on" Power "off" Overload detected

AC220V (50/60Hz)

Part No.	Original Part No.	Supplier Part No.
D701~704	GP15GLF	SVDS2V20

■ EXPLODED VIEWS



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